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Clinical and biochemical predictors of carotid intima media thickness in adolescents with type 2 diabetes

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Objectives: The aim of this study was to identify clinical parameters associated with increased carotid intima media thickness (CIMT) in adolescents with type 2 diabetes.
Background: Overweight children and adolescents are at increased risk of type 2 diabetes and early development of atherosclerotic lesions and cardiovascular complications.
Methods: Patients were selected among diabetics who presented to diabetes out patients' clinic. Criteria for selection were age (12–19 years), being overweight (BMI above the 95th percentile for age and gender), normal or high C-peptide, and negative studies for islet cell antibodies. Age and gender matched healthy subjects, were enrolled as a control group. Laboratory investigations included lipid profile, hypersensitive C-reactive protein (hs-CRP), HbA1c and assessment of insulin resistance by HOMA. According to HbA1c, patients were divided into, uncontrolled group (with HbA1c >6.5) and controlled group (with HbA1c $\leqslant 6.5$). Ultrasonographic analysis of CIMT was performed for all participants and its association with risk variables was analyzed.
Results: BMI, triglycerides, C-reactive protein, HbA1c and HOMA were significantly higher in diabetic patients than the controls. CIMT, HbA1c, systolic blood pressure, triglycerides, HOMA and C-reactive protein were significantly higher in uncontrolled than controlled diabetics, while there was no significant difference between the two groups as regard BMI, total cholesterol, LDL, HDL and C-peptide. In diabetic patients, CIMT correlated positively with BMI, duration of diabetes, systolic and diastolic blood pressure, HbA1c, HOMA, and C reactive protein.
Conclusion: CIMT is increased in adolescents with type 2 diabetes as compared to control subjects. Poor glycemic control, HOMA, increased C reactive protein, BMI, duration of diabetes and elevated blood pressure are associated with early atherosclerosis in these patients.

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Clinical characteristics and outcome of heart failure and captagon amphetamine use: An observational prospective study

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Introduction: The fenetylline (captagon) tablets (an amphetamine like substance) are a stimulant drugs which are widely used in the Arabian Peninsula.
Objectives: The aim of this study was to evaluate the clinical characteristics and outcome of acute heart failure in patients using captagon tablets.
Methods: From September, 2009, through December, 2011, 280 consecutive patients with acute dilated cardiomyopathy and acute heart failure syndrome presented to emergency department in one tertiary care center in Saudi Arabia were enrolled in this study. Patients were divided into 2 groups group I (40 patients) were captagon users and group II (240) were captagon non-users. Captagon use was elicited mainly by history taking on admission. Patients with coronary artery disease were excluded.
Results: Fourteen percent of patients (40 patients) were captagon users. Captagon users were younger (mean age in years of 23 ± 12 vs. 28 ± 9) and almost all of them were male (98% vs. 72%). About 40 % of captagon users were alcohol users and about 92% of them were smokers. Overall, captagon users had higher risk of in-hospital death (7% vs. 4%, p value <0.05), cardiogenic shock (15% vs. 8%, p value <0.05), pulmonary tuberculosis (7% vs. 1%, p value <0.05) and recurrent admission with heart failure (35% vs. 24%, p value <0.05). After adjustment for baseline variability, captagon use was found to be an independent risk factor of death and for recurrent admission in patients presented with cardiomyopathy and acute heart failure.
Conclusios: Captagon use was found to be an independent risk factor of death and other morbidities in patients presented with cardiomyopathy and acute heart failure. Our study underscores the importance of improving education concerning the cardiac risks of captagon use.

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Cobalt chromium stents versus stainless steel stents in diabetic patients

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Background: The clinical outcome in diabetic patients undergoing percutaneous coronary intervention (PCI) is inferior to that in non-diabetic patients. Several aspects of diabetic coronary artery disease appear to be responsible for this observation. In comparison with stainless steel stent, cobalt chromium stent has a higher radial strength and radio-opacity for similar electronegativity, this allow for the production of thinner struts with a similar radiological visibility.

Therefore we studied and compared six-months prognosis of cobalt chromium stent versus stainless steel Bare metal stents in diabetic patients undergoing PCI.
Methods and Results: Our study included seventy diabetic patients with Ischemic heart disease amendable to percutaneous stenting with stents $\geqslant 3$ mm in diameter and $\leqslant 25$ mm length. They were randomly assigned to cobalt chromium stents (Group I) or stainless steel stents (Group II). PCI was done with initial success and we excluded patients with unsuccessful PCI or complications during intervention, using stainless steel stent and chromium stent in the same lesion, left main stem lesions, osteal and bifurcational lesions.

Our primary end point was Major adverse cardiac events (death, Myocardial infarction, unstable angina, emergency CABG or target lesion revascularization); over period of 6 months and our secondary end point was in-stent restenosis assessed by coronary angiography at 6 months in the follow up period.

Total MACE in group (I) was 9 patients, coronary angiography was done for those patients after the cardiac event, that showed 7 patients with ISR and 2 of them showed patent stents. Patients without MACE whom undergone follow up coronary angiography after 6 months, revealed 6 patients suffered ISR out of 23 patients.

While total MACE in group (II) was 5 patients, coronary angiography for those patients showed 4 patients with ISR and 1 of them showed patent stent. Patients without MACE whom undergone follow